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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/918,158	07/30/2001	Robert A. DiChiara JR.	7784-000146	2919
27572	7590	05/04/2004	EXAMINER	
HARNES, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			FIORILLA, CHRISTOPHER A	
			ART UNIT	PAPER NUMBER
			1731	

DATE MAILED: 05/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/918,158	DICHIARA, ROBERT A.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Christopher A. Fiorilla	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 8-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                         |                                                                             |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                                |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____                                                             | 6) <input type="checkbox"/> Other: _____                                    |

Art Unit: 1731

1. Claims 8-22 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Applicant timely traversed the restriction (election) requirement in Paper dated 7/30/03.

2. This application contains claims 8-22 drawn to an invention nonelected with traverse in Paper dated 7/30/03. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1,2,5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Galligan et al. (5,422,331) in view of Deshpande et al. (6,110,439) for the reasons as set forth in the previous office action.

5. Claims 1,2,3,4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rorabaugh et al. (5,958,583) in view of Meyer et al. (4,542,113) for the reasons as set forth in the previous office action.

Art Unit: 1731

6. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Butler et al (6,497,776) in view of Meyer et al. (4,542,113) or Deshpande et al. (6,110,439) for the reasons as set forth in the previous office action.

7. The declaration filed on 2/5/04 under 37 CFR 1.131 has been considered but is ineffective to overcome the Butler et al. (6,497,776) reference.

The declaration does not establish possession of either the whole invention or something falling within the claim (e.g. a species). For example, the evidence does not show the solid content of the sol as claimed or the sol/alumina particle amounts as claimed.

8. Applicant's arguments filed 2/5/04 have been fully considered but they are not persuasive.

**With respect to the rejection of the claims under 35 USC 103 over Galligan et al. in view of Deshpande et al. (6,110,439) applicant argues:**

**Applicant submits that Galligan et al. should not be properly combined with Deshpande et al. As the Examiner notes, Galligan et al., in col. 6, describes a mixture that can be used as an undercoat to allow for adhesion of an over layer to a substrate. Contrary to this, Deshpande et al. teaches forming a gel or a substantially highly porous gel that will be formed into a thermal insulation. See, col. 1, lines 11-12. Therefore, it would not have been obvious by one skilled in the art to combine Galligan et al. with Deshpande et al.**

This argument is not persuasive. The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. *In re Keller* 208 USPQ 871, 881; *In re Sernaker* 217 USPQ 1. It is

maintained that the disclosures of the cited references would have suggested the use of a slurry with the solids content recited in Deshpande et al. in view of the generic sol taught by Galligan et al..

**Galligan et al. simply teaches mixing a sol with a selected refractory metal oxide. Even if one were to assume that the refractory metal oxide particles are similar to the alumina particles recited in independent Claim 1, Galligan et al. teaches only 50 to 80 percent by weight of the mixture may include the refractory metal oxide particles.**

This argument is not persuasive. First, it is submitted that Galligan et al. discloses the use of alumina particles (see col. 6, line 62). Further, in the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). It is not clear how applicant arrived at the above-mentioned 50-80 percent by weight range. However, col. 6, line 55 of Galligan et al. discloses the use of 5-50 percent by weight refractory metal oxide particles (e.g. alumina) and this overlaps the claimed range of 30-60 weight percent as recited in claim 1.

**Contrary to this, Deshpande et al. teaches only providing a wet gel generally formed with a silica, from various sources, to form a solution that can be augmented, such as providing a base or otherwise, to form a gel. Therefore, Deshpande et al. specifically teaches not mixing the sol with a particulate to form a mixture or slurry thereof. Specifically, as the Examiner notes in Example 4, the requirements to form a material that will not gel prematurely require that no more than 12% of the sol include solids rather than a mixture of a sol in particles. Therefore, Deshpande et al. teaches away from providing additional solids into a mixture that may include the sol or a sol that includes a high percentage of solids.**

This argument is not persuasive. Again, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have

Art Unit: 1731

suggested to those of ordinary skill in the art. *In re Keller* 208 USPQ 871, 881; *In re Sernaker* 217 USPQ 1. It is maintained that the disclosures of the cited references would have suggested the use of a slurry with the solids content recited in Deshpande et al. in view of the generic sol taught by Galligan et al..

**With respect to the rejection of the claims under 35 USC 103 over Rorabaugh et al. in view of Meyer et al. applicant argues:**

**Applicant submits that Rorabaugh et al. should not be properly combined with Meyer et al. As disclosed in Rorabaugh et al., an alumina sol is used to form a thermal protection coating on ceramic fibers that are woven into a flexible insulation blanket for modern spacecraft. Although, alumina particles may be added to the alumina sol to form a mixture that includes about 30 wt % alumina, Rorabaugh et al. discloses providing the material onto ceramic fibers that can be woven into thermal blankets. See col. 2, lines 23-32. Contrary to this, Meyer et al. discloses a material and method for forming spheroidal alumina particles according to an oil drop method. See, col 2., lines 22-24. Therefore, it would not have been obvious to one skilled in the art to combine the coating of Rorabaugh et al. with the material of Meyer et al. to form the mixture presently claimed in independent Claim 1. Specifically, Meyer et al. requires the formation of spheroidal alumina particles while Rorabaugh et al. is for providing a coating to ceramic fibers.**

This argument is not persuasive. The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. *In re Keller* 208 USPQ 871, 881; *In re Sernaker* 217 USPQ 1. It is maintained that the disclosures of the cited references would have suggested the use of a slurry with the solids content recited in Meyer et al. in view of the generic sol taught by Rorabaugh et al..

**Even if one was to combine Rorabaugh et al. with Meyer et al., one would not achieve each of the elements recited in independent Claim 1 . As stated by the Examiner, Rorabaugh et al. does not disclose providing a selected solids content in a sol. Moreover, Meyer et al. discloses providing a content greater than that presently recited in**

Art Unit: 1731

**independent Claim 1. See, col. 3, lines 1-2. In addition, Meyer et al. requires that the alumina sol includes a solids content of more than 20-40 wt % alumina to form the spheroidal particles so that they have various characteristics such as high strength or high pore volume. See, col. 2, lines 25-27. Therefore, it would not have obvious to one skilled in the art to combine Rorabaugh et al. with Meyer et al. to achieve the combination of independent Claim 1.**

This argument is not persuasive. In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). The fact that Meyer et al. discloses a solids content range which includes amounts greater than 25 wt% as claimed is irrelevant, since the range includes amounts which lie within the claimed range.

**Rorabaugh et al. and Meyer et al. disclose distinct materials that are not taught to be combined. Moreover, Meyer et al. requires a substantially high solids content to achieve selected results of the spheroidal particles while Rorabaugh et al. discloses a material to be coated onto ceramic fibers.**

This argument is not persuasive. It is unclear as to what materials applicant refers. Both Rorabaugh et al. and Meyer et al. are directed to alumina sols.

**With respect to the rejection of the claims under 35 USC 103 over Butler et al. (6,497,776) in view of Meyer et al. (4,542,113) or Deshpande et al. (6,110,439) applicant argues:**

**Applicant submits that Butler et al. is not proper prior art in light of the submission and declaration provided with this response. Applicant submits that the included declaration is evidence and proof that the claims of the present application were invented and reduced to practice prior to the filing of the Butler et al. reference. Therefore, Applicant submits that it is improper to combine Butler et al. with Meyer et al. and Deshpande et al.**

This argument is not persuasive. The declaration is ineffective to remove the reference for the reasons as set forth above.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher A. Fiorilla whose telephone number is (571) 272-1187. The examiner can normally be reached on M-F, 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**Christopher A. Fiorilla**  
**Primary Examiner**  
**Art Unit 1731**